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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,826	11/29/2001	Norimichi Chiba	216638US2S	9742

22850 7590 08/22/2005

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EXAMINER

TRAN, THUY V

ART UNIT PAPER NUMBER

2821

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/995,826

Applicant(s)

CHIBA ET AL.

Examiner

Thuy V. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on amendment submitted 06/08/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/29/01 & repl. sheets 6/8/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This is a response to the Applicants' amendment submitted on June 8<sup>th</sup>, 2005. In virtue of this amendment, original claims 1-8 are canceled; claims 9-14 are newly added; and thus, claims 9-14 are now presented in the instant application.

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 13-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitations "the connection means includes a connection portion which connects the first and second ground patterns and a non-connection portion which does not connect them" recited in lines 2-4 of claim 13 and "wherein the connection means includes a connection portion which connects the first and second ground patterns and a projection connected to the connection portion" recited in lines 1-3 of claim 14, are neither explicitly nor implicitly described in the specification to a person skilled in the art.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9-10 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) Fig. 9 in view of Sekine et al. (U.S. Patent No. 5,903,822).

With respect to claim 9, AAPA Fig. 9 discloses a radio set comprising (1) a first ground pattern (upper portion of [200] which has an electrical length of  $\lambda/2$ ), (2) a second ground pattern (lower portion of [200] which has an electrical length of  $\lambda/2$ ) adjacent to the first ground pattern, and (3) a  $\lambda/2$  monopole antenna [100] which is powered by capacitive coupling (via capacitor [110]) on a side of the first ground pattern. AAPA Fig. 9 further discloses that the phase of the electric current flowing between the first and second ground patterns is inverted (re. I2 and I3 shown in Fig. 9). However, AAPA Fig. 9 does not teach a connection means, which is provided between and electrically connects the first and second ground patterns.

Sekine et al. discloses, in Fig. 33, a radio set comprising a connection means [104], which is provided between and electrically connects first and second ground patterns [102-a' and 102-b].

It would have been obvious to one of ordinary skills in the art at the time of the invention to implement the radio set of AAPA Fig. 9 with a connection means between the ground patterns to electrically connect them in order to increase a degree of freedom since such an arrangement of the connection means for the stated purpose has been well known in the art as evidenced by the teachings of Sekine et al. (See col. 10, lines 56-58).

With respect to claim 10, the combination of AAPA Fig. 9 and Sekine et al. disclose a radio set wherein the connection means [104] is an inductor (see Sekine et al.; Fig. 33).

With respect to claims 12-14, the combination of AAPA Fig. 9 and Sekine et al. disclose a radio set wherein the connection means has an effective electrical length of  $\lambda/2$  (the limitations “the connection means includes a connection portion which connects the first and second ground patterns and a non-connection portion which does not connect them” recited in lines 2-4 of claim 13 and “wherein the connection means includes a connection portion which connects the first and second ground patterns and a projection connected to the connection portion” recited in lines 1-3 of claim 14, have no support in the specification; therefore, they are not treated on the merits).

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA Fig. 9 in view of Sekine et al. (U.S. Patent No. 5,903,822; Fig. 33) as applied to claim 9 above, and further in view of Sekine et al. (U.S. Patent No. 5,903,822; Fig. 45).

With respect to claim 11, the combination of AAPA Fig. 9 and Sekine et al. (Fig. 33) disclose all of the claimed limitations, as expressly recited in claim 9, except for the connection means being a capacitor.

Sekine et al., however, discloses the use of a capacitor [124] (which is included in device [122]; see Fig. 45 in Embodiment 6) to connect ground patterns [102-a, 102-b] together to prevent a direct current from flowing to a substrate (or housing) and to be against a radio frequency current (see col. 14, lines 61-63).

For such an advantage taught in Embodiment 6 including Fig. 45 of Sekine et al., to implement the radio set of the combination of AAPA Fig. 9 and Sekine et al. (Fig. 33) with the use of a capacitor, in lieu of the coil or inductor, to connect the first and second ground patterns together would have been deemed obvious to a person skilled in the art.

***Remarks and conclusion***

6. Applicant's arguments with respect to new claim 9 have been considered but are moot in view of the new ground(s) of rejection.

Applicants are also noted that the new title and the replacement sheets of Figs. 3-8 submitted on June 8<sup>th</sup>, 2005 have been approved.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

***Inquiry***

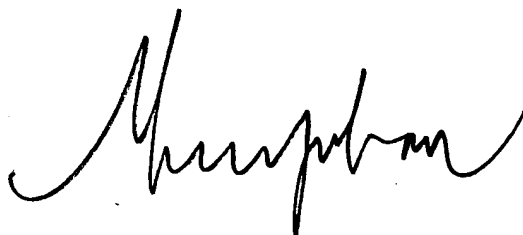
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -5:00 PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

08/19/2005

A handwritten signature in black ink, appearing to read 'Thuy V. Tran', is written over a light gray grid background.

**THUY V. TRAN**  
**PRIMARY EXAMINER**